

and the type of rank (0 for the rank from the highest, or any other value for the rank from the bottom).

Some of these functions overlap; for example, MIN and MAX are both covered by QUARTILE. In other cases, a custom sort or filter might give much the same result. Which you use depends on your temperament and your needs. Some might prefer to use MIN and MAX because they are easy to remember, while others might prefer QUARTILE because it is more versatile.

Using these functions

In some cases, you may be able to get similar results to some of these functions by setting up a filter or a custom sort. However, in general, functions are more easily adjusted than filters or sorts, and provide a wide range of possibilities.

At times, you may just want to enter one or more formulas temporarily in a convenient blank cell, and delete it once you have finished. However, if you find yourself using the same functions constantly, you should consider creating a template and including space for all the functions you use, with the cell to their left used as a label for them. Once you have created the template, you can easily update each formula as entries change, either automatically and on-the-fly or pressing the *F9* key to update all selected cells.

No matter how you use these functions, you will probably find them simple to use and adaptable for many purposes. By the time you have mastered this handful, you will be ready to try more complex functions.

Rounding off numbers

For statistical and mathematical purposes, Calc includes a variety of ways to round off numbers. If you are a programmer, you may also be familiar with some of these methods. However, you do not need to be a specialist to find some of these methods useful. You may want to round off for billing purposes, or because decimal places do not translate well into the physical world—for instance, if the parts you need come in packages of 100, then the fact you only need 66 is irrelevant to you; you need to round up for ordering. By learning the options for rounding up or down, you can make your spreadsheets more immediately useful.

When you use a rounding function, you have two choices about how to set up your formulas. If you choose, you can nest a calculation within one of the rounding functions. For instance, the formula `=ROUND((SUM(A1, A2))` adds the figures in cells A1 and A2, then rounds them off to the nearest whole number. However, even though you do not need to work with exact figures every day, you may still want to refer to them occasionally. If that is the case, then you are probably better off separating the two functions, placing `=SUM(A1, A2)` in cell A3, and `=ROUND(A3)` in A4, and clearly labeling each function.

For details on rounding methods, see the Help.

Volatile / non-volatile functions

The Open Document Format for Office Applications (OpenDocument) Version 1.2 includes the following definition: “Functions that are *always* recalculated whenever a recalculation occurs are termed *volatile* functions.

To understand some of the behaviors of a volatile function within Calc, consider a simple example in which you have created an empty spreadsheet and entered the formula `=RAND()` into cell A1 (RAND is one of Calc's volatile functions). Calc displays a random number between 0 and 1 in cell A1. If you then enter any value into a different cell (say cell B2 for the purpose of this discussion) and press Enter, you will notice that the value displayed in A1 is updated to show a different random number. Calc recalculates the random number in A1, despite the user not changing the formula in A1 and despite the updated B2 having no link to A1. In summary the RAND function will generate a new value when any cell is updated by selecting **Data > Calculate**